BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION OF	**)**	
DELMARVA POWER & LIGHT COMPANY FOR	**)**	
AN INCREASE INELECTRIC BASE RATES	**)**	**PSC DOCKET NO. 11-528**
AND MISCELLANEIOUS TARIFF CHANGES	**)**	
(FILED DECEMBER 2, 2011)	**)**	

DIRECT TESTIMONY AND EXHIBITS

OF

JAMES W. DANIEL

ON BEHALF OF

THE DIVISION OF THE PUBLIC ADVOCATE

May 15, 2012

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I. PROFESSIONAL TRAINING AND EXPERIENCE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James W. Daniel. My business address is 919 Congress Avenue, Suite 800, Austin, Texas 78701.

Q. PLEASE OUTLINE YOUR FORMAL EDUCATION.

A. I received the degree of Bachelor of Science from the Georgia Institute of Technology in 1973 with a major in economics. Subsequent to graduation from the Georgia Institute of Technology, I completed courses in accounting at Georgia State University.

Q. WHAT IS YOUR PRESENT POSITION?

A. I am a Vice President of the firm GDS Associates, Inc. ("GDS") and Manager of GDS' office in Austin, Texas.

Q. PLEASE STATE YOUR PROFESSIONAL EXPERIENCE.

A. From July 1974 through September 1979 and from August 1983 through February 1986, I was employed by Southern Engineering Company. During that time, I participated in the preparation of economic analyses regarding alternative power supply sources and generation and transmission feasibility studies for rural electric cooperatives. I participated in wholesale and retail rate and contract negotiations with

investor-owned and publicly-owned utilities, prepared cost of service studies on investor-owned and publicly-owned utilities and prepared and submitted testimony and exhibits in utility rate and other regulatory proceedings on behalf of publicly-owned utilities, industrial customers, associations and government agencies. From October 1979 through July 1983, I was employed as a public utility consultant by R. W. Beck and Associates. During that time, I participated in rate studies for publicly-owned electric, gas, water and wastewater utilities. My primary responsibility was the development of revenue requirements, cost of service, and rate design studies as well as the preparation and submittal of testimony and exhibits in utility rate proceedings on behalf of publicly-owned utilities, industrial customers and other customer groups. Since February 1986, I have held the position of Manager of GDS' office in Austin, Texas. In April 2000, I was elected as a Vice President of GDS.

Q. HAVE YOU TESTIFIED BEFORE ANY REGULATORY COMMISSIONS?

A. I have testified many times before regulatory commissions. I have submitted testimony before the following state regulatory authorities: the State Corporation Commission of Kansas, the Georgia Public Service Commission, the Public Utility Commission of Texas, the Texas Commission on Environmental Quality, the Texas Railroad Commission, the South Dakota Public Utilities Commission, the New Mexico Public Service Commission, the Arizona Corporation Commission, the Louisiana Public Service Commission, the Arkansas Public Service Commission, the Oklahoma Corporation Commission, and the Illinois Commerce Commission. I have also testified before the Federal Energy Regulatory Commission ("FERC"), and two Condemnation Courts appointed by the Supreme Court of Nebraska, and I have

submitted an expert opinion report before the United States Tax Court on utility issues. A list of regulatory proceedings in which I have presented expert testimony is provided as Exhibit JWD-1.

Q. WOULD YOU PLEASE DESCRIBE GDS?

A. GDS is an engineering and consulting firm with offices in Marietta, Georgia; Austin, Texas; Auburn, Alabama; Manchester, New Hampshire; Madison, Wisconsin; and Avon, Indiana. GDS has over 140 employees with backgrounds in engineering, accounting, management, economics, finance, and statistics. GDS provides rate and regulatory consulting services in the electric, natural gas, water, and telephone utility industries. GDS also provides a variety of other services in the electric utility industry including power supply planning, generation support services, financial analysis, load forecasting, energy efficiency, renewable energy, and statistical services. Our clients are primarily publicly-owned utilities, municipalities, customers of privately-owned utilities, groups or associations of customers, and government agencies.

II. INTRODUCTION

Q. BY WHOM ARE YOU RETAINED IN THIS PROCEEDING?

A. I have been retained by the Delaware Division of the Public Advocate ("DPA").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my direct testimony is to address the following areas and issues in Delmarva Power and Light Company's ("Delmarva" or "Company") rate application:

(1) The reasonableness of Delmarva's proposed Reliability Investment Recovery Mechanism Rider ("RIM"),

(2) The reasonableness of Delmarva's other proposed alternative regulation remedies for claimed regulatory lag problems,

(3) The reasonableness of Delmarva's proposed customer class cost-of-service study ("COSS") and rate design, and

(4) The appropriate transition to a modified fixed variable ("MFV") rate design should the Delaware Public Service Commission ("Commission") decide to adopt a MFV rate design for Delmarva.

Q. WOULD YOU PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS?

A. Yes. Based upon my review and analysis, I have reached the following conclusions and recommendations.

(1) Delmarva's proposed RIM is unsupported, unnecessary, flawed and lacking adequate details and should be rejected by the Commission.

(2) Delmarva's proposal to use forecasted test years is unsupported and burdensome to regulators and other parties to rate case proceedings. The Commission's use of part historic and part forecasted test years should not be changed.

(3) Delmarva has not adequately supported its proposed use of a multi-year rate cap plan and that proposal should not be considered in this proceeding.

(4) The customer class cost of service study presented by Delmarva is flawed and, therefore, should not be relied upon in this proceeding. The load data Delmarva relied upon in calculating its demand allocation factors does not match the test year accounting information on which the COSS is based. This undermines the confidence I have in the Company's COSS to be relied upon in the setting of rates. Delmarva has not completed a load study for 2011, and this data is critical for the proper allocation of costs. Once the Company's 2011 load study is complete, I recommend its COSS be re-run incorporating 2011 load data, and that parties be provided an opportunity to review and analyze the results. In addition to the load data problem, I believe the labor allocation factor Delmarva used to allocate its general and common plant accounts (FERC Accounts 389-399) should be replaced with the total distribution plant allocation factor to more accurately reflect the principle of cost causation.

(5) Delmarva's proposed increase in the Residential Service customer charge is exorbitant and causes significantly disproportionate rate increase impacts on customers within the residential rate class. If the Commission approves a rate increase for residential customers, then the increase in the customer charge should be tempered to reduce this large disparity in rate impacts. For the residential class, Delmarva has not sufficiently justified the regressive nature of its proposed rate design in which lower-usage customers are required to incur a greater percentage of the requested increase in distribution revenues through a proposed increase in the customer charge. In light of the Company's

significant overall increase in requested distribution revenues, some degree of moderation in setting the customer charge for the residential class is warranted. Therefore, I recommend the current customer charges and consumption rates be equally increased by the overall increase in revenues approved by the Commission for the residential class.

(6) Based upon my review of the Company's testimony related to the implementation of the MFV, I recommend the Commission allow its authorized working group to continue its task in sorting through the large number of issues associated with Delmarva's MFV before reaching any conclusions, and not decide any MFV matters in this distribution rate case. Because of the large number of issues associated with the implementation of an MFV rate design, as I outline later in my testimony, it would be premature for the Commission to address MFV in this proceeding.

III. RELIABILITY INVESTMENT RECOVERY MECHANISM

Q. WOULD YOU BRIEFLY DECRIBE THE COMPANY'S PROPOSED RIDER RIM?

A. Rider RIM is an automatic rate adjustment provision that, according to Delmarva's rate application, will allow the Company to recover costs associated with new capital expenditures that are supposed to improve system reliability. According to the testimony of Delmarva witness William Gausman, Rider RIM would also automatically adjust rates for new system automation facilities and for storm damage repairs. A major problem with rate adjustment provisions such as Rider RIM is that it

is piecemeal ratemaking. It could also provide a disincentive for Delmarva to operate efficiently. In addition, the Rider is a brief one page proposed addition to Delmarva's tariff and lacks details as to how the Rider would work.

Q. WOULD YOU BRIEFLY DISCUSS DELMARVA'S BASIS FOR ITS PROPOSED RIDER RIM?

A. Yes. The primary reason presented by Delmarva for its proposed Rider RIM is to alleviate claimed problems caused by regulatory lag. Delmarva witness William Gausman also states that Rider RIM will facilitate its reliability program which is intended to "prevent a deteriorating trend in performance and result in the continuous improvement of overall electric service." In addition, in the Company's application, it states that Rider RIM will lessen the burden on the Commission, Delmarva, and others due to less frequent rate cases.

Q. WOULD YOU PLEASE EXPLAIN WHAT IS MEANT BY THE PHRASE "REGULATORY LAG"?

Regulatory lag is generally referred to as the delay between the occurrence of cost increases and the approval of higher rates to recover such costs by a regulatory authority. I would note that regulatory lag can also occur when costs decrease and there is a delay in the implementation of lower rates. I would also point out that regulatory lag is not something new. It has existed since the beginning of utility regulation.

Q. HAS DELMARVA DEMONSTRATED THAT ITS CLAIMED REGULATORY LAG PROBLEM IS A REAL, LONG TERM ISSUE THAT REQUIRES EXTRAORDINARY RATEMAKING SOLUTIONS?

A. No. Delmarva has not demonstrated that its claimed regulatory lag problem is worse now than it has been historically or that it is expected to continue indefinitely. Delmarva attributes some of its regulatory lag problem to a lower growth rate in sales as compared to its planned growth in capital additions. Since this claim is just for the unbundled wires company, I would be surprised if the sales growth vs. plant growth imbalance hasn't occurred to a greater degree in the past when Delmarva was a bundled utility. One could look at historic data when generation plant additions were made to show that Delmarva survived much greater plant addition imbalances without any sort of capital expenditure ("CapEx") recovery mechanism. While on a total Delmarva basis, the table below provides an historic example of the situation that Delmarva now claims it cannot handle without extraordinary rate relief.

TABLE 1

Year	Generation Plant Additions		MWh Sales Growth	
	Amount	Percent Increase	Amount	Percent Increase
1989	$129,092	12.93%	544,094	6.44%
1990	$31,011	2.75%	253,815	2.82%
1991	$101,205	8.74%	237,516	2.57%
1992	$36,381	2.89%	44,264	0.47%
1993	$172,331	13.30%	614,892	6.45%
1994	$57,229	3.90%	190,618	1.88%
6 Year Average	$87,875	7.42%	314,200	3.44%

Q. HAS A SIMILAR SITUATION ALSO OCCURRED WITH REGARD TO HISTORIC DISTRIBUTION PLANT ADDITIONS?

A. Yes. For the period 2001 to 2005 Delmarva made substantial additions to its distribution plant during a period when customer growth was much lower. The table below shows, on a total Delmarva basis, the annual increases in distribution plant and MWh sales. I would note that a similar situation occurred for the period 1988 to 1995.

TABLE 2

Year	Distributon Plant Additions		MWh Sales Growth	
	Amount	Percent Increase	Amount	Percent Increase
1990	$13,383	4.51%	253,815	2.82%
1991	$16,150	5.21%	237,516	2.57%
1992	$2,950	0.90%	44,264	0.47%
1993	$16,034	4.87%	614,892	6.45%
1994	$21,241	6.16%	190,618	1.88%
1995	$90,330	24.66%	758,536	7.34%
6 Year Average	$26,681	7.72%	349,940	3.59%

Based on this historic data, the problem Delmarva claims is the reason Rider RIM is needed has occurred in the past, and the Company did not need a CapEx mechanism then.

Q. DELMARVA STATES THAT RIDER RIM IS NEEDED TO FACILITATE ITS RELIABILITY PROGRAM. HAS DELMARVA ADEQUATELY SUPPORTED THIS CLAIM?

A. No. In fact, Delmarva has not even described the objective of its reliability program, has not stated what it considers an acceptable level of reliability and has not provided any cost/benefit analysis test for the CapEx projects it wants to recover through Rider

RIM. In fact, in support of the proposed Rider RIM, Delmarva witness William Gausman states on page 18, lines 9 and 10, of his direct testimony that it will "result in the continuous improvement of overall service." This indicates that there is no limit to the level of reliability improvements that may be made. This open-endedness is especially troubling given the proposed expedited review process for new CapEx projects to be recovered under the proposed Rider RIM.

Q. IS DELMARVA EXPERIENCING A DETERIORATING TREND IN RELIABILITY PERFORMANCE THAT WARRANTS THE NEED FOR EXTRAORDINARY RATE RELIEF, SUCH AS ITS PROPOSED RIDER RIM?

A. No. In fact, for the most part, Delmarva's reliability performance has been experiencing an improving trend not a deteriorating trend. Below is the recent history of three common reliability statistics for the Delmarva system.

TABLE 3

Year	SAIFI	CAIDI	SAIDI
2005	1.51	122	169
2006	1.63	144	234
2007	1.60	123	197
2008	1.47	145	213
2009	1.35	141	190
2010	1.47	136	199
2011	1.41	136	192

As shown above, Delmarva's reliability performance has been improving. This improvement began before Delmarva began its reliability program.

Q. HOW DOES DELMARVA'S RELIABILITY PERFORMANCE COMPARE TO OTHER UTILITIES?

A. [TO BE PROVIDED LATER.]

Q. DOES DELMARVA ALSO CLAIM THAT ITS PROPOSED RIDER RIM SHOULD LESSEN THE BURDEN ON PARTIES DUE TO FEWER BASE RATE CASES AND WILL LOWER COSTS FOR CUSTOMERS?

A. Yes. On page 7 of the Company's application it states that:

> However, adoption of the RIM should serve to reduce Delmarva's need to file future rate base proceedings as frequently, and so lessen the burden on the Commission, Delmarva and other parties. In addition, customers would see lower costs from less frequent base rate cases.

Q. DO YOU AGREE WITH THESE DELMARVA STATEMENTS?

A. No. Delmarva has not shown that the burden of reviewing annual RIM filings will be more or less than periodic base rate cases. If the Commission were to allow comprehensive reviews of the annual RIM filings, as it should, then it is possible that parties' regulatory costs could increase. Delmarva's claim that customers would see lower costs is counter intuitive and also unsupported. Since Delmarva's proposed Rider RIM allows for more frequent rate increases, customers will see higher, not lower, costs. I also find it interesting that Delmarva only states that Rider RIM "should" reduce future base rate cases. In other words, Delmarva is not committing itself to file fewer base rate cases. It wants the most egregious outcome from a customer's perspective, i.e., no limit on the frequency of base rate cases plus annual rate adjustments under the proposed Rider RIM.

Q. WHAT DO YOU MEAN BY PEICEMEAL RATEMAKING?

A. Piecemeal ratemaking occurs when a utility is allowed to adjust rates for changes in a specific cost category, such as reliability related distribution plant additions. The problem with piecemeal ratemaking is that it does not look at the utility's total or overall costs.

Q. PLEASE EXPLAIN WHY THAT IS A PROBLEM.

A. It is possible that other costs could be decreasing and, therefore, offset the specific cost increase the utility is proposing to recover. For example, if Delmarva is replacing old, deteriorated plant with new plant then it is possible that maintenance expenses would be decreasing. Delmarva witness William Gausman also says Rider RIM would be used to recover the cost of new investment in system automation. Another example of this mismatch problem would be the costs eliminated or reduced by the new system automation costs recovered automatically through Rider RIM.

Q. IS THERE AN EVEN MORE OBVIOUS COST DECREASE THAT SHOULD BE USED AS AN OFFSET TO ANY ALLOWED COST INCREASE FOR RELIABILITY RELATED PLANT ADDITIONS?

A. Yes. Delmarva's total plant is depreciated every year which in turn reduces its rate base due to a continually increasing balance of accumulated depreciation. There is no question that this annual increase in accumulated depreciation reduces the Company's return requirements and income tax requirements. If the Commission were to allow any CapEx cost recovery mechanism, then the plant additions should be reduced by the annual increase in accumulated depreciation.

I would also note that Delmarva is not only proposing to recover reliability related plant additions through Rider RIM but also any storm restoration costs. However, no mention is made about reducing those storm restoration costs by insurance proceeds.

Q. ARE THERE OTHER PROBLEMS WITH AUTOMATIC OR EXPEDITED RATE ADJUSTMENT PROVISIONS SUCH AS DELMARVA'S PROPOSED RIDER RIM?

A. Yes. Rate adjustment mechanisms can act as a reduced incentive for the utility to operate efficiently. Similarly, the rate adjustment mechanism can allow a utility to "gold plate" its system. In addition, as with Delmarva's proposed Rider RIM, the automatic rate adjustment mechanism reduces the utility's risk without any offsetting adjustment to the utility's return on equity.

Q. YOU PREVIOUSLY MENTIONED THAT DELMARVA'S PROPOSED RIDER RIM IS A BRIEF ONE PAGE ADDITION TO ITS TARIFF AND LACKS DETAILS AND SPECIFICS AS TO HOW IT WILL BE IMPLEMENTED AND HOW THE FACTORS WILL BE CALCULATED. PLEASE EXPLAIN THIS PROBLEM.

A. If the Commission decides to approve an expedited cost recovery mechanism for reliability related plant upgrades, it then needs to require that the Rider be very specific as to how it will be determined what facilities are includable, how costs will be allocated to customer classes, how billing determinants will be determined, how true-ups will be considered, and what cost savings or reductions should be used to offset the costs. The proposed language in Delmarva's Rider RIM lacks all of the necessary details, and provides much too leeway to Delmarva on how to calculate the

RIM factors. Also, the more detailed and specific the Rider RIM, the less controversy and disagreement there will be in subsequent annual Rider RIM review cases.

Q. IN SUMMARY SHOULD THE COMMISSION APPROVE DELMARVA'S PROPOSED RIDER RIM?

A. No. The Company's proposed Rider RIM is unsupported, unnecessary and superficial. The Commission should refrain from adopting automatic or periodic rate adjustment mechanisms except in extraordinary situations. The proposed Rider RIM does not meet that criteria and should be rejected.

Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING DELMARVA'S PROPOSED RIDER RIM?

A. Yes. Delmarva conducts periodic customer surveys in its service territory. A copy of the report on its most recent customer survey was provided in response to data request DPA-RD-15. As shown on page 6 of that report, Delmarva received the highest rankings from its customers for "Providing reliable electric service". Also, as shown on page 7, Delmarva compared favorably to its "peer" utilities in providing reliable service. However, on page 6 of that same customer survey report, Delmarva received its lowest rankings for the "Reasonableness of electric rates" and for "Keeping electric rates as low as possible". Given these results, it appears that Delmarva, through its reliability program and proposed Rider RIM, is wanting to spend substantial amounts of money on areas that it already is doing well, i.e., reliability, which will then make even worse the area that it does poorly, i.e., providing reasonable electric rates. Delmarva witness Mark Lowry may have clearly summarized the Company's objective on page 50 of his direct testimony when he

states, "With more investment, reliability would improve". What the Company fails to do is determine at what point reliability is satisfactory and when to stop making more investment. Delmarva's customers appear to believe the Company has already reached that point. A copy of the Fall 2011 customer survey referenced to previously is provided as my Exhibit JWD-2.

IV. OTHER DELMARVA ALTERNATIVE REGULATION PROPOSALS

Q. OTHER THAN RIDER RIM, HAS DELMARVA SUBMITTED ANY OTHER ALTERNATIVE REGULATION PROPOSALS?

A. Yes. As discussed on pages 51 and 52 of the direct testimony of Delmarva witness Mark Lowry, the Company is also advocating the use of a fully forecasted test year for ratemaking purposes and that the Commission consider the adoption of multi-year rate plans as additional alternative regulation ("Alt Reg") proposals.

Q. DOESN'T THE COMMISSION ALREADY ALLOW UTILITY'S TO USE A PARTIALLY FORECASTED TEST YEAR?

A. Yes. Utilities are allowed to use a test year that includes 6 months actual data and 6 months forecasted data. This approach is sometimes referred to as a "hybrid" test year. In addition, utilities are allowed to make certain adjustments for known changes to the test year data. During the rate proceeding, the 6 months of forecasted data is updated to actual data so that the parties have a very current, full year of actual data to use.

Q. IS IT IMPORTANT THAT RATE CASES USE ACTUAL DATA, AS OPPOSED TO FORECASTED DATA, FOR SETTING RATES?

A. Yes. The use of actual data allows the parties access to detailed information that supports the actual investment and expenses used to develop a utility's revenue requirement and customer class cost allocations. This actual data provides a sound basis for the Commission, and other parties, to confidently determine the appropriate rate levels for a utility. By contrast, very little detailed information is available regarding forecasted test year data. The burden is shifted to the parties to try to determine if the Company's cost estimates are reasonable.

Q. DOES DELMARVA ACKNOWLEDGE THAT THE USE OF A FULLY FORECASTED TEST YEAR INCREASES THE BURDEN ON THE COMMISSON AND OTHER PARTIES?

A. Yes. Delmarva witness Mark Lowry discusses the Company's proposal for using a fully forecasted test year on page 51 of his direct testimony. In that discussion, Mr. Lowry refers to the "somewhat greater complexity" of rate cases based on fully forecasted test years.

Q. WHAT IS DELMARVA'S REASON FOR PROPOSING THE USE OF FULLY FORECASTED TEST YEARS IN FUTURE RATE CASES?

A. Delmarva claims that the use of a fully forecasted test year will further help to alleviate the claimed problems caused by regulatory lag.

Q. HAS DELMARVA SUPPORTED THIS REASON OR CLAIM?

A. No. In fact, the support provided by Delmarva indicates that the industry results for using a hybrid test year, i.e., the test year allowed by the Commission, is preferable to a fully forecasted test year. Delmarva witness Mark Lowry attached a report he helped prepare to his direct testimony. The report is titled "Forward Test Years for U.S. Electric Utilities" and is identified as Schedule MNL-2. The report was prepared for the Edison Electric Institute ("EEI"), the national lobbying organization for investor-owned electric utilities. Table 8, on pages 50 and 51, of the report provides a comparison of financial performance for utilities that use historic, hybrid and forecasted test years. For 2 of the 3 financial statistics provided, the utilities using a hybrid test year out-performed the utilities using a fully forecasted test year. The hybrid test year utilities averaged an actual return on capital of 9.5% while utilities that used forecasted test years had an average of 9.1%. In addition, the hybrid utilities had average earnings before interest, taxes, depreciation, and amortization ("EBITDA") of 5.9 while utilities that used forecasted test years had an average EBITDA of 5.1. Based on this information, the Commission should continue to use a hybrid test year in order to better achieve Delmarva's claimed objective.

Q. PLEASE BRIEFLY DESCRIBE THE COMPANY'S PROPOSAL REGARDING MULTI-YEAR RATE PLANS.

A. Delmarva hasn't provided any specific proposal for a multi-year rate plan. While Company witness Mark Lowry generally describes types of multi-year rate plans on pages 20 through 26 of his direct testimony, no specific multi-year rate plan is offered or proposed for Delmarva. Rather, on page 52 of his direct testimony, Mr. Lowry

merely states that the Commission may also want to consider some form of a multi-year rate plan in conjunction with the RIM.

Q. WHAT IS YOUR RECOMMENDATION REGARDING A MULTI-YEAR RATE PLAN?

A. Given that Delmarva has not made a specific proposal for a multi-year rate plan, the Commission should not consider adopting one. I would note that only a handful of regulatory commissions have adopted multi-year rate plans and that most of those were related to natural gas utilities or bundled electric utilities.

V. CUSTOMER CLASS COST ALLOCATIONS

Q. PLEASE DESCRIBE HOW A COST-OF-SERVICE STUDY IS CONSTRUCTED.

A. The purpose of a customer class cost-of-service study is to determine the portion of the utility's total cost of service or revenue requirement that should be borne by each customer class absent other factors that may be appropriate to consider. Each cost component of the utility's total system cost of service is either directly assigned or allocated to the various customer classes. The results are then used to determine the cost of serving each customer class. The results of the COSS will also provide important information for designing rates. As stated later in my testimony, the results of the COSS are usually a primary factor in distributing revenue increases, or decreases, among a utility's customer classes.

Q. WHAT ARE THE BASIC STEPS FOR PREPARING A CUSTOMER CLASS COSS?

A. Typically, there are three steps. These are the functionalization, classification, and allocation of costs. In some cases, there is an additional step or consideration. That is, the grouping of customers into appropriate customer classes. Customers are usually grouped into classes by type of service, by usage characteristics and/or by level of service.

Q. WOULD YOU BRIEFLY DESCRIBE THE FUNCTIONALIZATION, CLASSIFICATION, AND ALLOCATION STEPS?

A. As stated in my previous answer, cost of service studies are typically developed in three distinct steps. First, the various components of the utility's overall revenue requirements are functionalized to their functional use, e.g., transmission, distribution, metering and billing, and customer service. Next, the functionalized costs are classified based on cost causation factors to the cost categories of fixed or demand-related, variable or energy-related, and customer-related. Finally, the classified costs are directly assigned or allocated to customer classes using allocation factors developed for each classified cost category. Various methodologies or approaches exist for conducting each step in the COSS process.

Q. PLEASE DESCRIBE THE COMPANY'S COST-OF-SERVICE STUDY.

A. The Company's COSS is sponsored by Mr. Elliot P. Tanos and attached to his direct testimony as Schedule EPT-1 based on the 12-month test year ended June 30, 2011. The COSS model was actually constructed by Management Applications Consulting, Inc. and provided to the parties in this proceeding as a password-protected Microsoft

Excel workbook. It begins with the functionalization of plant investment based on the FERC Uniform System of Accounts, and further separates plant investment into sub-categories such as facilities related to primary and secondary voltages. Corresponding operating expenses follow this same plant-related allocation methodology. Functionalized plant and expenses are then classified as demand- or customer-related, and then the classified costs are directly assigned or allocated to customer classes. The Company's COSS starts with the distribution rate base and its associated components, and then addresses the operating revenues, operation and maintenance expenses, depreciation and amortization expenses, taxes, and the development of the labor allocation factor. Operating income and distribution rate base across classes provide the rates of return that are relied upon by Company witness Ms. Marlene C. Santacecilia in designing Delmarva's proposed rate levels. Schedule EPT-2 provides a summary of the detailed results categorized as "Demand Distribution" and "Customer Components" from the standpoints of a "present" rate of return (5.90%), and a "claimed" rate of return (7.87%).

Q. PLEASE DESCRIBE THE ANALYSIS YOU CONDUCTED.

A. I reviewed the Company's COSS mathematical relationships for the functionalization, classification, and allocation of relevant FERC account amounts paying particular attention to Delmarva's requested allocation factors, along with the load and usage data relied upon in their development. Delmarva's COSS allocation factors are a combination of externally- and internally-derived data. The externally-derived factors are calculated from customer class demand, customer, and revenue data. The internally-derived allocation factors mostly trace back to the allocation of individual

and combined FERC accounts in the model. Besides the issues I discuss below, in general the Company's requested allocation factors have been sufficiently constructed in order to provide guidance in allocating any revenue deficiency to the Company's customer classes.

Q. DID YOUR ANALYSIS LEAD TO ANY PARTICULAR CONCERNS?

A. Yes. Although the Company's requested revenue deficiency allocation to the residential and general service secondary classes is close in magnitude to the overall system average increase, the load data Delmarva relied upon does not match the test year accounting information on which the COSS is based. This undermines the confidence I have in the Company's COSS.

Q. WHAT TYPE OF DATA IS REQUIRED TO DEVELOP ALLOCATION FACTORS FOR A COSS?

A. A COSS requires energy use, customer counts, and demand data by class. In general, customer and energy data can be obtained directly from the utility's books and records. Demand data is obtained from metering records or developed using load research information. Distribution demand allocation factors are developed using a class's maximum diversified demand ("MDD"), or non-coincident peak ("NCP") demand. Customer classes served by Interval Data Recorder ("IDR") meters can provide demand data directly. Before Delmarva's recent deployment of advanced meters, a substantial part of its residential and small commercial customer base, however, was historically served by meters which are incapable of providing demand data. For those classes not served by IDR meters, the standard utility practice is to perform load research studies to estimate the maximum demands and NCPs for the

effected customer classes. These activities are conducted by placing load research meters on premises selected through statistical sampling of customers.

Q. HAS DELMARVA CONDUCTED LOAD RESEARCH FOR ITS NON-IDR METERED CUSTOMERS FOR THIS PROCEEDING?

A. Yes. For the calculation of the NCP demands for its residential customers, the Company relied on load factors derived from an internal load research survey along with consumption data from calendar year 2010.[1] Similarly, for its MDD allocation factors, Delmarva has requested to use demand data for the twelve months ended December 31, 2010. In addition, the Company relied upon 1998 demand losses to calculate the class demands at the source of power supply. Two significant consequences result. In matching the most up-to-date load data with accounting data, a utility endeavors to accurately represent operations in the coming rate year as close to reality as possible. This is consistent with the rationale supporting the allowance for known and measureable adjustments to test year data. Similarly, when data that is stale, or not the most up-to-date, is used to establish requested allocation factors, the accuracy of cost allocation is called into question.

Q. PLEASE PROVIDE AN EXAMPLE OF HOW THE ALLOCATION OF COSTS CAN BE QUESTIONABLE BASED ON OBSOLETE DATA.

A. Table 2 provides the NCPs for the residential and residential space heating customers based on consumption data for the twelve month period ending December 31, 2010, as well as for the projected twelve month period ending June 30, 2013. NCP demands make up half of the DEMSEC allocation factor and all of the CUST369 factor, so the

[1] Delmarva's Response to Request for Information PSC-COS-38-2 Attachment C.

percentage difference between the two time periods directly affects the allocation of costs in the COSS. Allowing for the assumption that other class's consumption levels do not materially change over the two time periods, the residential class would be notably affected by a re-allocation of costs based on load data in closer proximity to the rate year.

TABLE 4

NCP Based on 2010 Consumption vs. Projected Consumption

Class	Distribution Energy for 2010 Billing Year NCP	Projected for 12 Months Ending 6/30/2013* NCP	Difference %
Residential	**1,640,649**	**1,422,053**	**15.4%**
Res Space Heating	**1,032,341**	**928,362**	**11.2%**

*Source: Delmarva's Response to PSC-COS-38-2 Attachment C and PSC-COS-44

Q. WHAT ARE THE CONSUMPTION DATA TO WHICH YOU REFER?

A. For the residential and residential space heating customers, the following table provides a comparison of the annual consumption amounts which shows drops of 15.4% and 11.2%, respectively.

TABLE 5

2010 Consumption vs. Projected Consumption (kWh)

Class	Distribution Energy for 2010 Billing Year	Projected for 12 Months Ending 6/30/2013*	Difference %
Residential	**2,030,184,786**	**1,759,688,380**	**15.4%**
Res Space Heating	**1,088,754,193**	**979,093,588**	**11.2%**

*Source: Delmarva's Response to PSC-COS-38-2 Attachment C and PSC-COS-44

Q. HAVE YOU COMPARED DELMARVA'S REQUESTED ALLOCATION FACTORS IN THIS PROCEEDING TO THOSE FROM DOCKET NO. 09-414?

A. Yes. For the residential and general service secondary classes Table 4 outlines the percentage changes in key allocation factors for the data submitted in this proceeding and Delmarva's most recent base rate case, Docket No. 09-414. As Table 4 demonstrates, the factors on which the Company's COSS relies have detrimentally shifted against residential customers.

TABLE 6

PERCENTAGE DIFFERENCES
DEMAND ALLOCATION FACTORS: 3/31/2009 VS. 6/30/2011

	ALLOCATION FACTORS (1)	TOTAL DELAWARE DISTRIBUTION (2)	TOTAL RESIDENTIAL SERVICE (3)	TOTAL GENERAL SERV SECONDARY (4)
Class Maximum Diversified Demands	(DATA)	8.4%	17.9%	-0.4%
Maximum Non-Coincident Demands	(DATA)	5.5%	9.2%	-0.6%
Distribution Primary-Class DED - DE	DEMPRI	8.4%	17.9%	-0.4%
Distr Second-50% MDD & 50% Max NCD	DEMSEC	0.0%	3.3%	-11.3%
Dist Line Transformer	DEMTRNSF	0.0%	3.9%	-9.5%
Acct 369-Services-Class Max NCD	CUST369	7.0%	9.2%	-0.6%

Source: Delmarva's Response to RFI DPA-COS-49

Q. HAVE YOU COMPARED DELMARVA'S LOAD DATA FROM PRIOR YEARS IN ORDER TO APPRECIATE ITS VOLATILTY?

A. Yes. Delmarva provided load information for 2007, 2008, and 2010. Table 5 speaks to the volatility of the year-over-year data and magnifies my concern that frequent changes in load data impacts cost allocation.

TABLE 7

Percentage Changes 2007-2010

CLASS	2007-08 MDD	2008-10 MDD
Residential	-9%	23%
Residential Space Heating	-11%	7%
Gen Svc Secondary Small	-2%	-3%

CLASS	2007-08 NCP	2008-10 NCP
Residential	3%	10%
Residential Space Heating	3%	9%
Gen Svc Secondary Small	-8%	-1%

Source:
Delmarva's Response to RFI PSC-COS-40-2A, 2B Atts.

Q. WHAT IS THE SECOND SIGNIFICANT CONSEQUENCE YOU REFERRED TO ABOVE?

A. Besides affecting the allocation of costs, changes in load data, and specifically consumption, have material impacts on rate design and consequently the ultimate revenues a utility ends up collecting from its customers. By not matching billing determinants with the test year costs that rates are calculated to collect, the Company sets itself up for under-earning or over-earning its authorized rate of return. If Delmarva's projected consumption for the 12-month time period ending 6/30/13 turns out to be accurate, it could be placing its earnings targets in jeopardy as soon as rates are approved.

Q. ARE YOU SUGGESTING RATES SHOULD BE SET USING PROJECTED BILLING DETERMINANTS?

A. No. I am merely reiterating a long-standing tradition of rate making that the allocation of costs and the calculation of rates should be based on load data that match the costs a utility is requesting to recover. If there is a mismatch between the two, then costs most likely have been incorrectly allocated leaving some customer classes to subsidize others. My primary concern with Delmarva's COSS is that the demand allocation factors that have been broadly relied upon in the allocation of costs are based on load data at least six months prior to the end of the test year, the twelve months ended June 30, 2011. It is my understanding, however, that the Company has not completed a load research study for 2011.

Q. WHAT IS YOUR RECOMMENDATION ON HOW TO TREAT DELMARVA'S COSS?

A. Delmarva has not completed a load study for 2011, and that data is critical for the allocation of costs. Therefore, for those classes whose revenues have been identified with not recovering costs, I recommend the Commission initially apply its approved system average increase to all classes. Once the Company's 2011 load study is complete, I recommend Delmarva's COSS be rerun incorporating 2011 load data, and that parties be provided an opportunity to review and analyze the results.

VI. RATE DESIGN

Q. PLEASE PROVIDE AN EXPLANATION OF RATE DESIGN.

A. Rate design is the establishment of rates—which are ultimately charged and billed to customers—through mathematical calculations based on the functionalization, classification, and allocation of revenues across rate classes using the guidance of a cost-of-service study discussed above with the appropriate billing determinants associated with each customer class. A Proof of Revenue statement brings the elements together by outlining the billing units, proposed rates, and the resulting annual base revenues to be collected from customers that reflect class-allocated costs. Rates can be designed to include point-of-delivery, facility charges, and service riders. Point-of-delivery charges collect costs related to billing, metering, and customer services while facilities charges collect the costs incurred by the utility to provide the system facilities that generate and transmit electricity from the generation source to the customer. These charges are levies collected either through consumption (kWh) or demand (kW) charges depending on the customer rate class. Service riders allow the utility to recover specific costs outside of base rates. For base rate revenues, the sum of all the customer class rates multiplied by the respective billing determinants should equate to the utility's total requested base revenue requirement.

Q. PLEASE DESCRIBE IMPORTANT FACTORS THAT SHOULD BE CONSIDERED IN DESIGNING RATES.

A. As a general rule, rates should eventually be set at cost. Nevertheless, regulatory authorities may limit the immediate movement to cost based rates due to factors such

as gradualism. Gradualism is a concept that is applied to prevent a class or subclass of customers from receiving an overly large increase in rates. Put differently, the movement to cost based rates should be made gradually rather than all at once.

In his seminal work on utility ratemaking Professor James Bonbright provided key evaluative criteria for a desirable rate structure. The link between rates and the cost of service is just one of eight factors he provides:

> What then, are the good attributes to be sought and the bad attributes to be avoided or minimized in the development of a sound rate structure? Many different answers have been suggested in the technical literature and in the reported opinions by courts and commissions; and a number of writers have summarized their answers in the form of a list of desirable attributes of a rate structure, comparable to the "canons of taxation" found in the treatises on public finance. The list that follows is fairly typical, although I have derived it from a variety of sources instead of relying on any one presentation. The sequence of the eight items is not meant to suggest any order of relative importance:
>
> 1. The related, "practical" attributes of simplicity, understandability, public acceptability, and feasibility of application.
>
> 2. Freedom from controversies as to proper interpretation.
>
> 3. Effectiveness in yielding total revenue requirements under the fair-return standard.
>
> 4. Revenue stability from year to year.
>
> 5. Stability of the rates themselves, with a minimum of unexpected changes seriously adverse to existing customers. (Compare "The best tax is an old tax.")
>
> 6. Fairness of the specific rates in the apportionment of total costs of service among the different consumers.
>
> 7. Avoidance of "undue discrimination" in rate relationships.

8. Efficiency of the rate classes and rate blocks in discouraging wasteful use of service while promoting all justified types and amounts of use:

   a. in that control of the total amounts of service supplied by the company;

   b. in the control of the relative uses of alternative types of service (on-peak versus off-peak electricity, Pullman travel versus coach travel, single-party telephone service versus service from a multi-party line, etc.).[2]

The fair apportionment of rates provided in Bonbright's list of factors speaks to the importance of the issue. Although adherence to the elements of a cost-of-service study is a goal, I believe rates should be set that take into consideration these additional criteria in order to have a complete analysis. Other considerations such as public acceptability, and the efficiency in avoiding wasteful use of service, should be part of determining a utility's rate structure. This is, especially true when considering the size of the increase in distribution revenues proposed by Delmarva.

Q. PLEASE DESCRIBE HOW DELMARVA DESIGNED ITS REQUESTED RATES.

A. The Company designed its requested rates in keeping with its chief objective of adhering to the results of its COSS in which costs have been classified between customer and demand/energy components.[3] Delmarva then assessed customer impacts and made adjustments so that proposed customer charges were limited to a 50% maximum increase from current rates. The Company's rationale was that those charges could gradually move toward full cost recovery and this would also allow customers to adjust to a "price signal".

[2] Exhibit JWD-??, James C. Bonbright, Principles of Public Utility Rates, 1961 edition, pp. 290-291.
[3] Direct Testimony of Marlene C. Santacecelia at 5, and Schedule MCS-1 at 2.

Q. IS DELMARVA'S PROPOSED RATE DESIGN CONSISTENT WITH SOUND PRICING PRINCIPLES?

A. As far as the design of its proposed residential customer charge, I do not believe so. Charges in rate design are usually undertaken along with changes in the utility's revenue requirement. The time to significantly shift the collection of costs from volumetric and demand charges to monthly minimum customer charges is not when an increase in distribution system average revenues of more than 19% has been requested. The results of Delmarva's proposed rate design produces large disparities in the percent increase within the residential class, even without the increase in revenue. When the increase in revenues is included, this differential between percent increases is magnified.

Q. COULD YOU PROVIDE EXAMPLES WITH AN EXPLANATION OF WHAT YOU MEAN?

A. Yes. The Company proposes the residential and residential space heating classes receive a 50% increase in customer charges from $8.20 to $12.27 per customer, per month. As the following table demonstrates, lower usage customers will experience a sizeable increase in average bills, while at the same time higher usage customers will not. There are significant differences in bill impacts among customers within each class. For the non-space heating residential customers, bill increases range from 3% for 4,000 kWh in monthly usage to 35.7% for 25 kWh in monthly usage. Table 8 shows a fair number of lower usage categories will experience large bill impacts. For space heating residential customers bill increases range from 3.6% for 4,000 kWh to 7.8% for 500 kWh.

TABLE 8

DELAWARE BILLING COMPARISON
RESIDENTIAL SERVICE

Proposed Increase in Rates

NON-SPACE HEATING			SPACE HEATING	
Monthly Usage	Proposed Increase		Proposed Increase	
(kWh)	**($)**	**(%)**	**($)**	**(%)**
0	$4.07	**49.6%**		
25	$4.15	**35.7%**		
50	$4.23	**28.2%**		
75	$4.31	**23.4%**		
100	$4.39	**20.1%**		
150	$4.55	**15.9%**		
200	$4.72	**13.3%**		
250	$4.87	**11.5%**		
300	$5.03	**10.2%**		
350	$5.19	**9.3%**		
400	$5.35	**8.5%**		
450	$5.51	**7.9%**		
500	$5.67	**7.4%**	$5.62	**7.78%**
600	$5.99	**6.7%**	$5.93	**7.12%**
700	$6.32	**6.1%**	$6.24	**6.61%**
750	$6.47	**5.9%**	$6.39	**6.40%**
800	$6.63	**5.7%**	$6.55	**6.21%**
900	$6.95	**5.3%**	$6.85	**5.88%**
1,000	**$7.27**	**5.0%**	**$7.17**	**5.62%**
1,200	$7.91	4.6%	$7.78	5.20%
1,500	$8.88	4.2%	$8.70	4.76%
2,000	$10.47	3.7%	$10.25	4.30%
2,500	$12.07	3.5%	$11.78	4.01%
3,000	$13.68	3.3%	$13.33	3.82%
3,500	$15.28	3.1%	$14.86	3.68%
4,000	$16.87	3.0%	$16.41	3.57%

Source: Schedule MCS-3 at 1.

Q WOULD YOU EXPECT THIS PROBLEM TO ALSO OCCUR IN DELMARVA'S NEXT RATE CASE?

A Yes. The problem illustrated in Table 8 above will be compounded in Delmarva's next rate case. As previously discussed, in this case Delmarva is proposing to limit the increase in the residential customer charge approximately to 50%, or an increase from $8.20 per month to $12.27 per month. In its next rate case, I would expect Delmarva to propose to increase the residential customer charge to the full COSS level, or $16.81 per month. This is another $4.54 per month for just the customer charge and will result in another huge percentage increase for low usage customers.

Q. SINCE THE DELIVERY CHARGE REPRESENTS ONLY A PORTION OF A CUSTOMER'S TOTAL ELECTRIC BILL, SHOULD THE AMOUNT OF THE DELIVERY CHARGE INCREASES BE A CONCERN?

A. Absolutely. For lower usage residential customers, the delivery charge portion of their bills represents a larger percentage of the overall bill. The regressive nature of Delmarva's current and proposed customer charge for the residential non-space heating class is shown in Table 9. In addition, the implication of designing rates in which more costs are recovered through fixed monthly charges is certainly beneficial for the Company in enhancing revenue stability because revenues are not as dependent upon sales. However, this rate design weakens the price signal received by customers related to consumption which will undermine energy efficiency and conservation efforts the Commission has embraced. Moreover, the farther rates move toward being fixed monthly charges, the more business risk gets shifted from the Company to customers and the greater the protection the Company receives for its

investments. As long as this shift in risk is reflected in a lower return on equity, customers should not be harmed on a total class basis.

TABLE 9

DELAWARE BILLING COMPARISON
RESIDENTIAL SERVICE

NON-SPACE HEATING		
Monthly Usage (kWh)	Current Delivery Charge to Total Bill (Incl. Supply) (%)	Requested Delivery Charge to Total Bill
0	100.0%	100.0%
25	76.2%	82.5%
50	63.3%	71.4%
75	55.1%	63.6%
100	49.5%	58.0%
150	42.3%	50.2%
200	37.8%	45.1%
250	34.8%	41.6%
300	32.6%	38.9%
350	31.0%	36.9%
400	29.7%	35.2%
450	28.7%	33.9%
500	27.8%	32.8%
600	26.5%	31.1%
700	25.5%	29.8%
750	25.1%	29.3%
800	24.8%	28.8%
900	24.2%	28.0%
1,000	23.7%	27.4%
1,200	23.0%	26.4%
1,500	22.3%	25.4%
2,000	21.5%	24.3%
2,500	21.0%	23.7%
3,000	20.7%	23.2%
3,500	20.5%	22.9%
4,000	20.3%	22.7%

Source: Schedule MCS-3 at 1.

Q. SHOULD THE PRINCIPLE OF ENERGY CONSERVATION BE A CONSIDERATION IN DESIGNING RATES?

A. Yes. Of the evaluative criteria of Professor Bonbright I provided above, he also recommended the following guideline on energy conservation which is one of three fundamental criteria that form the basis for rate-making objectives.

> Among these objectives, three may be called primary, not only because of their widespread acceptance but also because most of the more detailed criteria are ancillary thereto. They are…
>
> …(c) the optimum-use or consumer-rationing objective, under which the rates are designed to discourage the wasteful use of public utility services while promoting all use that is economically justified in view of the relationships between costs incurred and benefits received.[4]

Higher customer charges encourage - or at least do little to discourage - consumption because for a customer to reduce the overall dollar amount paid per kWh consumed, consumption has to increase. This is incompatible with energy efficiency programs that are instituted to reduce consumption. Rate structures that empower consumers to better manage and reduce their energy consumption are more consistent with the objectives of conservation and energy efficiency than those with high customer charges.

Q. DOES THE COMPANY'S RATE DESIGN CONFLICT WITH THE PRICE SIGNAL ASSOCIATED WITH ENERGY CONSERVATION?

A. Yes. Rate designs that have high minimum charges or fixed customer charges provide a signal to customers that communicates to them, "Whether you consume one kWh or 10,000 kWhs, your minimum cost is the same." Microeconomics states that to reduce

[4] Exhibit JWD-??, James C. Bonbright, Principles of Public Utility Rates, 1961 edition, p. 296.

average fixed costs (such as a monthly customer charge), one must increase the units over which they are spread. The same idea holds for the consumption of electricity.

Q. HOW DO DELMARVA'S PROPOSED CUSTOMER CHARGES COMPARE WITH THOSE OF OTHER UTILITIES IN PROXIMITY TO ITS SERVICE AREA?

A. Not favorably. The following table outlines the customer charges of other utilities in proximity to Delmarva's service area. Delmarva's *current* customer charge is in line with other utilities in proximity to its service area.

TABLE 10

Monthly Customer Charge

	Atlantic City Energy	PECO	PPL	Metropolitan Edison	Baltimore Gas & Electric	Delmarva Proposed
Residential	**$2.51**	**$7.17**	**$8.75**	**$8.11**	**$7.50**	**$12.27**

Source: Current approved tariff sheets

Q. ARE THERE ANY ADDITIONAL ITEMS YOU WANT TO DISCUSS WITH RESPECT TO RATE DESIGN?

A. Yes. It appears the Company did not translate its requested increase in its general service transmission class into rates, and thus the requested tariff sheet does not reflect the correct rates.[5] I recommend Delmarva update this rate before the end of the rate case, and that Commission Staff provide a review in the tariff compliance portion of the proceeding.

[5] Schedule MCS-2 at ??.

Q. WHAT IS YOUR RECOMMENDATION WITH RESPECT TO THE RESIDENTIAL CUSTOMER CHARGE IN THE COMPANY'S RATE DESIGN?

A. The circumstances in this proceeding warrant some degree of moderation in setting the customer charge for the residential class. Based upon the large increase in distribution revenues Delmarva requested, I recommend the current customer charges and consumption rates be increased by the overall increase in revenues approved by the Commission for the residential class. This yields a rate design where all billing components within a rate class retain their current relationships in order to avoid large impacts on lower usage customers.

VII. MODIFIED FIXED VARIABLE RATE DESIGN

Q. PLEASE SUMMARIZE THE HISTORY OF DELMARVA'S PROPOSED MFV RATE DESIGN.

A. In PSC Docket No. 06-284, a recent natural gas base rate case for Delmarva, the Company proposed a decoupling mechanism, a Bill Stabilization Adjustment ("BSA"), which would have severed the link between gas revenues and gas sales. The proposed BSA would have been a monthly adjustment procedure in which the actual revenues collected each month were compared to the revenues determined in the Company's most recent base rate case, adjusted for changes in the number of customers. Any difference between the two would then be converted to a rate per CCF and added to, or subtracted from, customers' bills in a subsequent month. The BSA would consequently compensate Delmarva for changes in consumption between

rate cases due to its conservation efforts. The Company ultimately agreed to withdraw its BSA request and the parties to the case agreed to participate in a generic statewide proceeding to address decoupling mechanisms for gas and electric distribution utilities.[6] Subsequently, on March 27, 2007, the Commission initiated Regulation Docket No. 59 and in that proceeding Delmarva proposed a revenue decoupling mechanism similar to its previously-proposed BSA.

After a series of workshops, Staff recommended the Commission not approve the use of surcharges such as a BSA, but supported consideration of a MFV rate design as a potential mechanism to remove disincentives to conservation efforts and to more appropriately align fixed costs with the manner they are recovered. After the Hearing Examiner issued her findings and recommendations, the Commission specifically addressed the MFV rate design by approving Staff's recommendation that possible adoption be linked to a base rate proceeding, but that the flexibility of addressing rate design changes outside a base rate proceeding, if warranted, was also desired.[7] On June 25, 2009, Delmarva filed an application to implement a MFV rate design for its electric utility[8] and afterwards on November 3, 2009, in Order No. 7681, the Commission consolidated that filing with Delmarva's pending rate case at the time, Docket No. 09-414.

[6] Delaware PSC Docket No. 06-284, *In the Matter of the Application of Delmarva Power & Light Company for a Change in Natural Gas Base Rates* (Filed August 31, 2006), Order No. 7152 at 9.
[7] PSC Regulation Docket No. 59, *In the Matter of the Investigation of the Public Service Commission Into Revenue Decoupling Mechanisms for Potential Adoption and Implementation by Electric and Natural Gas Utilities Subject to the Jurisdiction of the Public Service Commission* (Opened March 20, 2007) at 5.
[8] PSC Docket No. 09-276T, *In the Matter of the Application of Delmarva Power & Light Company for Approval of a Modified Fixed Variable Rate Design for Electric Rates* (Filed June 25, 2009).

Q. WHAT DID THE COMMISSION DECIDE IN REGARDS TO THE MFV RATE DESIGN IN DOCKET NO. 09-414?

A. In Order No. 8011 in Docket No. 09-414, the Commission approved the provisions of the Third Settlement Agreement which addressed the mechanics and the conceptual framework of any revenue decoupling plan that may ultimately be presented to the Commission for approval. The plan for implementing an MFV rate design, as agreed to by the parties, will include but not be limited to:

(a) a strategy for educating Delmarva's customers on issues concerning the MFV rate design, such as:
  (i) the purpose of the rate design;
  (ii) how it will affect customers' bills';
  (iii) impacts on existing low-usage customers and efforts to mitigate such impacts;
  (iv) programs/mechanisms to save customers money through conservation and demand response, including how customers can use these programs/mechanisms to manage energy costs; and
  (v) how customers can learn more about the proposed rate design and both current and future money-saving programs;
(b) the programs and mechanisms that Delmarva will make available to help customers save money under the MFV rate design, such as:
  (i) additional usage information and feedback mechanisms for customers to reduce energy consumptions;
  (ii) opportunities for customers to participate in time-of-day pricing to lower unit costs;
  (iii) expanded opportunities for demand response, particularly during peak demand periods; and
  (iv) energy efficiency programs and services in collaboration with the SEU;
(c) any proposed modifications to the existing MFV rate design; and
(d) a proposed date for implementation of MFV rates.

Q. IN DOCKET NO. 09-414, IN ADDITION TO A COMPREHENSIVE PLAN TIED TO A MFV RATE DESIGN, DID THE COMMISSION IDENTIFY OTHER ISSUES TO ADDRESS?

A. Yes. The Commission stated that any decoupling plan must demonstrate the mechanisms available to customers to manage energy usage, conservation, and demand response programs, along with the following expectations.

1. The AMI initiative will be fully operational so that customers will have the opportunity to monitor and manage their energy usage if they so choose;
2. The decoupling plan would describe energy efficiency options available to customers; and
3. That Delmarva to have appropriately educated customers regarding the proposed MFV rate design and its impact on customers at various usage levels.

Q. PLEASE DESCRIBE THE COMPANY'S MODIFIED FIXED VARIABLE RATE DESIGN IT HAS REQUESTED IN THIS PROCEEDING.

A. Similar to what it requested in prior dockets, Delmarva has proposed to eliminate all volumetric billing for its electric distribution revenue requirement, and instead collect its approved demand costs via demand charges. The proposed MFV rate design features a two-part rate structure consisting of a monthly customer-related charge and a distribution demand charge ("DDC") that are designed to recover the functional costs identified in the Company's COSS. With the exception of the general service transmission and lighting classes, the MFV applies to all customer classifications. The billing determinant for the DDC is the transmission peak load contribution ("PLC") developed on a customer-specific basis for each premises. In this proceeding, the proposed MFV rates have been designed to collect the functionalized revenues Delmarva proposed and total customer impacts of the MFV fully mirror those of its proposed rates.[9]

[9] Direct Testimony of Marlene C. Santacecilia at 9, lines 6-9.

Q. WHAT IS THE DIFFERENCE BETWEEN A DEMAND CHARGE AND A CONSUMPTION CHARGE?

A. Demand charges are structured to collect the fixed costs of the capacity for the facilities required to deliver electricity based on a customer's peak demand (expressed in kilowatts) for a given time period. Consumption charges collect fixed and variable costs based on the quantity of electricity consumed (expressed in kilowatt hours) for a given time period. If customers are able to shift their demand for electricity to off-peak time periods by implementing DSM programs, then new capacity (fixed) costs can be avoided. With the installation of advanced meters, utilities now have the capability of measuring demand for small general service and residential customers.

Q. DOES DELMARVA'S MFV RATE DESIGN PROVIDE A SUPERIOR PRICE SIGNAL AS COMPARED TO THE CONSUMPTION CHARGE FOR RESIDENTIAL AND SMALL COMMERICAL CUSTOMERS THAT IS CURRENTLY IN PLACE?

A. Delmarva's MFV rate design actually mutes the price signal residential and small commercial customers would receive because it shifts cost recovery to a less variable demand charge. In general, kilowatts demanded are much lower than kilowatt hours consumed, higher usage customers demand more kilowatts, and lower usage customers demand fewer kilowatts. Between those two endpoints, there are many combinations of consumption and demand. Hence, customers whose demands are low to begin with, say between .5 and 2 kilowatts per month, are less able to reduce their total demand - and bills - compared to higher-use customers who consume 2,500

kWhs per month or more. Any price signal, therefore, associated with the Company's proposal is likely to have little effect on the bills these customers pay. Moreover, Delmarva's proposal to update customer PLCs only annually contributes to the lack of pricing information and could actually have the opposite effect on consumption if customers realize they are locked into a monthly amount for twelve months or longer.

Q. ARE THERE OTHER REASONS DELMARVA'S PROPOSED MFV RATE DESIGN SHOULD NOT BE IMPLEMENTED AT THIS TIME?

A. Yes, primarily for two reasons. First, until customers can be sure that any technological and billing issues associated with the deployment of the Company's new smart meters will be something in which they can place their confidence, no new pricing structure should be implemented. One has to go no farther than to pick up a daily newspaper to understand the difficulties of implementing new pricing structures and metering new technologies simultaneously. Second, a comprehensive education program that provides customers with details about how their usage and demand of electricity is measured and billed using Advanced Metering Infrastructure ("AMI"), should be allowed enough time to be implemented so that all customers can meaningfully participate in any reduction in demand through lower bills with a minimal amount of confusion.

Q. HAS THE COMPANY FULLY CONSIDERED THE IMPACT OF THE MFV RATE DESIGN ON LOWER USAGE RESIDENTIAL AND SMALL GENERAL SERVICE CUSTOMERS?

A. It does not appear so based on the information the Company has provided to date and the one-size-fits-all pricing proposal.[10] In order to appropriately consider the effects of the MFV rate design on lower usage residential and small general service customers their monthly kilowatts demanded for the test year should be identified and the appropriate rates designed based on the incentive to reduce demand.

Q. DOES CHANGING A RATE DESIGN FROM ONE THAT IS BASED ON CONSUMPTION TO ONE BASED ON DEMAND AFFECT LOWER USAGE CUSTOMERS?

A. Yes, to their detriment. Under Delmarva's current consumption charges, reduced consumption still has the benefit of bringing about benefits in lower bills. Demand charges based on average demand are not as closely linked to consumption, thereby discouraging conservation for lower-usage customers. Delmarva's MFV proposal exacerbates the problem by relying on the PLC because the billing determinants used to design the demand charges correspond neither with the units used to derive cost allocation factors, nor consumption.

Q. WHAT ARE YOUR CONCERNS WITH DEMAND CHARGES THAT ARE CALCULATED BASED ON DELMARVA'S TRANSMISSION PLC?

A. In this proceeding, and in Docket No. 09-414, the Company proposed to calculate the DDC factor for each customer based on the PLC for each customer premises. For this case, Delmarva annualized load data from the month of January 2011 to calculate its proposed distribution rate for each customer class.[11] This is inconsistent with the

[10] Delmarva's Responses to Request for Information DPA-RD-6 and 7
[11] Delmarva's Response to PSC's Request for Information, PSC-RD-14.

Company's concept of linking distribution costs to transmission peak load that occurs in the summer cooling season. If the Commission ultimately decides to implement MFV rate design, the Company should be required to provide the comprehensive load data needed to properly design rates.

I also have a more fundamental concern. Delmarva has not provided enough information to determine the magnitude of any subsidization among customers and customer classes caused by using inconsistent load data to allocate costs and design rates. In its COSS, the Company allocated distribution plant costs using demand factors based on Class MDD and Customer NCP load data, which are peak and average peak allocation methodologies. However for its rate design, Delmarva proposed to calculate rates based on the PLC that relies on peak demand data. In order to identify any subsidization effects that result from this mismatch of demand methodologies, the Company should be required to provide cost allocation and rate design information under each approach. Until that is done, the costing and pricing relationships cannot be fully understood and the MFV rate design should be denied. In addition, once those relationships are better understood, rate design based on actual load data should be available since smart meters are fully deployed and operational. Table 11 illustrates the differences in the Company's allocation factors that complicate the allocation of costs and rate design associated with the use of the PLC.

TABLE 11

TABLE 11

Comparison--Demand Allocation Factors			
Class	Delmarva Requested MDD	Delmarva Requested NCP	Delmarva Requested PLC
Residential	38.83%	40.54%	39.14%
Res Space Heating	14.19%	25.51%	15.10%
General Service Sec-Small	14.83%	13.50%	2.12%

*Source: Delmarva's Response to PSC-COS-37-2 Att. B and and PSC-RD-14

Furthermore, Delmarva's current rate design already features demand charges for those customer classes that have demand meters. For those classes, the proposed MFV demand charge would be higher on a per kilowatt basis than the proposed demand charge would be under the current rate design. Another problem would occur for the residential space heating customers whose charge is 12% higher than the proposed rate for non-space heting residential customers. The PLC is based on peak summer loads and dependent upon summer usage patterns, while space heating customers' demands peak in the winter heating season. It is doubtful residential space heating customers would understand why they should pay a higher rate than those of residential non-space heating customers, since their demands for electricity are less in the more costly summer season.

Finally, I am concerned that the PLC is not the proper billing determinant if the objective is to align the proper price signal to the demand for distribution service. PLC is a transmission peak load measurement and not closely related to the planning and design of distribution facilities. Because the planning and design of distribution

facilities is related to the demand for distribution service, the Company chose to allocate distribution plant on the basis of distribution demand allocation factors. This is consistent with the principle of cost causation. The use of PLC for billing demands is inconsistent with that principle.

Q. DOES DELMARVA'S MFV RATE DESIGN FUNCTION AS A DECOUPLING MECHANISM?

A. Yes. The MFV rate design is intended to stabilize recovery of demand-related costs from customers over the course of each year by muting the relationship between delivery service revenues and the level of electricity consumption. The proposed MFV rate design functions as a decoupling mechanism by fixing the amount of revenue recovered through the demand charge at the level approved in a distribution rate case, by one of two approaches. The first approach would be to limit adjustments to both the demand charge and the billing determinants to the effective dates of rate changes following distribution rate cases which would maintain approved revenue levels. The major drawback would be that the customer's bill for delivery service would remain constant until the demand charge is updated in a subsequent rate case no matter how much the customer reduced its demand or usage through energy conservation. The second approach would be to annually adjust the demand charge at the same time the PLC is adjusted. However, like with the first option, customers would have to wait at least 12 months before receiving any type of pricing feedback.

Q. HAS THE COMPANY ACCOUNTED FOR THE REDUCED BUSINESS RISK THAT A MFV RATE DESIGN PROVIDES IN ITS REQUESTED RETURN ON EQUITY ("ROE")?

A. No. Delmarva has made no adjustment to its requested ROE that would account for the increased revenue stability and reduced business risk as a result of the Commission approving its proposed MFV rate design. If the Commission ends up approving the Company's MFV rate design, then it should also approve a lower ROE to track the Company's lower risks.

Q. WILL AN MFV RATE DESIGN, IF APPROVED, REDUCE DELMARVA'S BUSINESS RISK?

A. It should. Business risk is the risk that a utility's expected income will be less than anticipated due to fluctuations in revenues, expenses, or both. Because Delmarva's proposed MFV rate design will stabilize fluctuations in revenues by fixing the amount to be recovered, there will be less likelihood expected income will be less than anticipated by investors. This, in turn, should lower the Company's required return on equity. Therefore, if the Commission approves the Company's proposed MFV rate design, in maintaining the economic relationship between risk and return, it is paramount that Delmarva's ROE be adjusted downward as well.

Q. BY HOW MUCH SHOULD THE COMPANY'S ROE BE ADJUSTED IF THE COMMISSION APPROVES AN MFV RATE DESIGN?

A. The Company has not provided enough information to make a determination. In order to assess the reduced risk of Delmarva not collecting anticipated revenues, it would have to provide the numerical data demonstrating the extent to which the erosion and/or fluctuation in revenues would be stemmed. A comparison of utilities without such mechanisms would then have to be undertaken in order to determine the appropriate adjustment.

Q. WHAT ARE YOUR CHIEF CONCERNS WITH THE COMPANY'S PROPOSED MODIFIED FIXED VARIABLE RATE DESIGN?

A. I will describe my concerns in the order I discussed them above. First, the proposed MFV rate design further exacerbates the regressive nature of Delmarva's proposed rate design that increases the current residential class customer charge by 50% (as well as similar increases proposed for other customer classes). Second, Delmarva has not presented a comprehensive plan for its MFV rate design as required by the Commission's Order No. 8011 outlined above. Third, without a detailed analysis that shows which customers would incur lower or higher billings based on their respective PLC demands, it would seem that arriving at the proper rate levels would be no more likely than a shot in the dark based on the information provided to date. Fourth, any ability for low-usage customers to meaningfully reduce bills directly through decreased demand would be foreclosed if the MFV rate design is approved. Fifth, other than to say customer growth will contribute to the stabilization of revenues, Delmarva has not provided enough information that demonstrates the extent to which load growth will stem any erosion in revenues, or add to revenues so as to render the request for an MFV moot.[12] The Company has also not adequately addressed the issue Staff raised in Docket No. 59 of the stratification of customers in a customer class to preclude a disproportionate increase in rates for smaller volume users. For each customer class, Delmarva's proposal is a "one-size-fits-all" rate that if approved would apply to all customers, no matter their usage, in the same class. A tiered rate structure in which a MFV rate design that featured higher rates as demand rose could be an equitable approach among customers that should be considered. With

[12] Delmarva's Response to DPA's Request for Information, DPA-RD-5,

Delmarva's AMI in place in which smart meters could measure demand over a desired time interval, a tiered rate structure that appropriately values quantities demanded, should be considered. Finally, if the Commission approves the Company's proposed MFV rate design, in order to maintain the economic relationship between risk and return, it is paramount that Delmarva's ROE be adjusted downward.

Q. WHAT IS YOUR RECOMMENDATION?

A. The Company's MFV proposal should be denied. I recommend the Commission allow its authorized working group to continue its work in sorting through the large number of issues associated with Delmarva's MFV before reaching any conclusions, and not decide any issues in this proceeding. For the Commission to decide in this proceeding the large number of matters associated with the implementation of an MFV rate design would be premature for the reasons I outlined above.

VIII. SUMMARY AND CONCLUSIONS

Q. WOULD YOU PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS?

A. Yes. Based upon my review and analysis, I have reached the following conclusions and recommendations.

(1) Delmarva's proposed RIM is unsupported, unnecessary, flawed and lacking adequate details and should be rejected by the Commission.

(2) Delmarva's proposal to use forecasted test years is unsupported and burdensome to regulators and other parties to rate case proceedings. The

Commission's use of part historic and part forecasted test years should not be changed.

(3) Delmarva has not adequately supported its proposed use of a multi-year rate cap plan and that proposal should not be considered in this proceeding.

(4) The customer class cost of service study presented by Delmarva is flawed and, therefore, should not be relied upon in this proceeding. The load data Delmarva relied upon in calculating its demand allocation factors does not match the test year accounting information on which the COSS is based. This undermines the confidence I have in the Company's COSS to be relied upon in the setting of rates. Delmarva has not completed a load study for 2011, and this data is critical for the proper allocation of costs. Once the Company's 2011 load study is complete, I recommend its COSS be re-run incorporating 2011 load data, and that parties be provided an opportunity to review and analyze the results. In addition to the load data problem, I believe the labor allocation factor Delmarva used to allocate it's general and common plant accounts (FERC Accounts 389-399) should be replaced with the total distribution plant allocation factor to more accurately reflect the principle of cost causation.

(5) Delmarva's proposed increase in the Residential Service customer charge is exorbitant and causes significantly disproportionate rate increase impacts on customers within the residential rate class. If the Commission approves a rate increase for residential customers, then the increase in the customer charge should be tempered to reduce this large disparity in rate impacts. For the

residential class, Delmarva has not sufficiently justified the regressive nature of its proposed rate design in which lower-usage customers are required to incur a greater percentage of the requested increase in distribution revenues through a proposed increase in the customer charge. In light of the Company's significant overall increase in requested distribution revenues, some degree of moderation in setting the customer charge for the residential class is warranted. Therefore, I recommend the current customer charges and consumption rates be equally increased by the overall increase in revenues approved by the Commission for the residential class.

(6) Based upon my review of the Company's testimony related to the implementation of the MFV, I recommend the Commission allow its authorized working group to continue its task in sorting through the large number of issues associated with Delmarva's MFV before reaching any conclusions, and not decide any MFV matters in this distribution rate case. Because of the large number of issues associated with the implementation of an MFV rate design, as I outline later in my testimony, it would be premature for the Commission to address MFV in this proceeding.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

EXHIBIT JWD-1

List of Testimony, Affidavits, and Expert Reports
Presented in Regulatory and Court Proceedings

EXHIBIT JWD-2

EXHIBIT JWD-3

EXHIBIT JWD-4

EXHIBIT JWD-5

EXHIBIT JWD-6